

MicroGST/5 and 8

5 and 8 Port 10/100/1000Base-T Gigabit Ethernet Switches

GEP-32005T 5 Port Switch
GEP-32008T 8 Port Switch



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1. Introduction

Gigabit Ethernet over copper technology is a proven cost-effective way for network equipment to be upgraded from Fast Ethernet to Gigabit speeds. The need of expensive fiber optic cabling for Gigabit speeds is eliminated by using standard 4-pair Category 5e copper cabling. This technology creates high-speed backbone connections between switches, servers, databases, and workstations.

Unicom's 5 and 8 Port Desktop Gigabit Ethernet Switches are an ideal solution for solving traffic congestion at the core of the network. They offer Auto-Negotiation 10/100/1000Base-T Gigabit Ethernet ports that can significantly improve your network backbone performance. They will also fit into any enterprise level network to act as an exit to the backbone switch.

The 5 and 8 Port Gigabit Ethernet Switches feature an **Auto MDI/MDIX** function for each port as well as store-and-forward switching and can auto-learn and store source addresses on a 4K MAC address table.

Features

- Conforms to IEEE 802.3, 802.3u, 802.3ab and 802.3x
- Automatic MDI/MDIX crossover for all ports
- 4K entry MAC address table
- 1Mbit Memory buffer
- Back-plane:
 - 5 port: 10Gbps back-plane
 - 8 port: 16Gbps back-plane

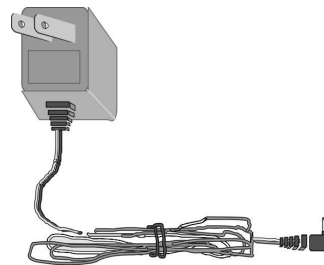
- N-Way Auto-Negotiation
- Back pressure half duplex
- Flow control full duplex
- True non-blocking switching
- Store-and-Forward architecture support

Package Contents

- 5 or 8 Port Desktop Gigabit Ethernet Switch
- Power Adapter
- Four Rubber Feet
- User Manual



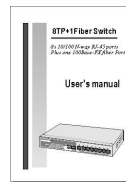
5 or 8 Port Desktop Gigabit Ethernet Switch



DC Power Adapter



Rubber Feet



User Guide

Figure 1-1. Package Contents

Compare the contents of your 5 or 8 Port Gigabit Desktop Ethernet Switch package with the standard checklist above. If any item is missing or damaged, please contact your local dealer for service.

2. Hardware Description

This Section describes the hardware of the MicroGST/5 and 8 switches.
 The physical dimensions of each switch are **165 x 100 x 32.5 mm**
 (L x W x H)

Front and Rear Panel

The Front Panel of the MicroGST/5 and 8 switches consists of a power LED indicator for the unit and LED indicators (100/1000, Link/Activity, Full duplex/Collision) for each Gigabit port.

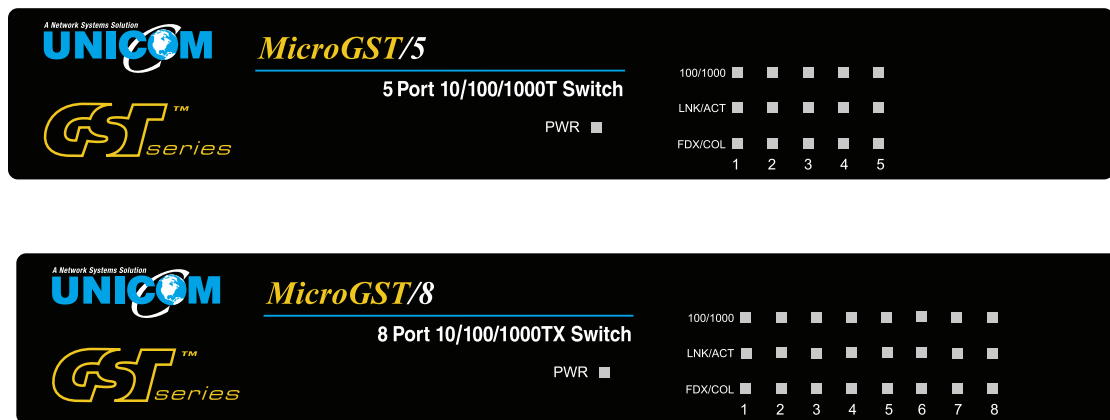


Figure 2-1. The Front Panel of the MicroGST/5 and 8 switches

The Rear Panel of the MicroGST switches consists of Auto-Negotiation 10/100/1000Mbps Ethernet RJ-45 connectors.

- **RJ-45 Ports (Auto MDI/MDIX):** Five or eight Auto-Negotiation 10/100/1000 Mbps Ethernet RJ-45 connectors
 [Auto MDI/MDIX means that you can connect to another switch or workstation with either straight-through or crossover cabling.]

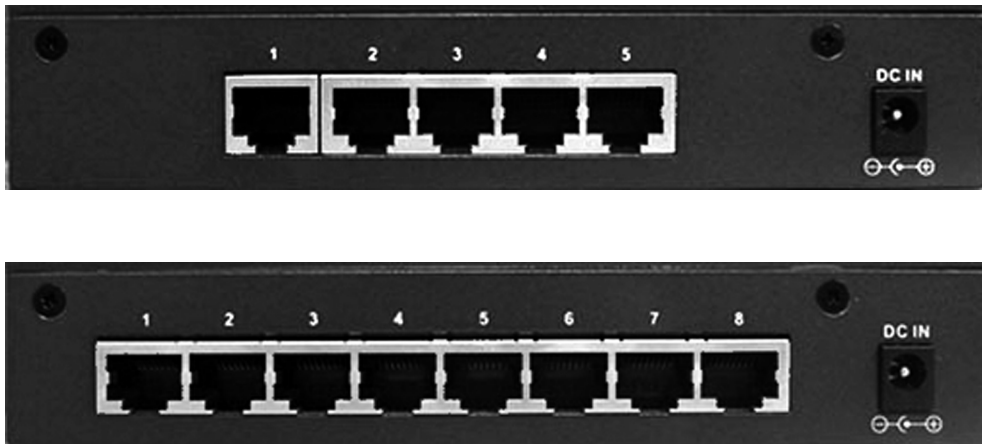


Figure 2-2. The Rear Panel of the MicroGST/5 and 8 switches

LED Indicators

The LED Indicators gives real-time monitoring of system operating status. There are three LED indicators (100/1000, LNK/ACT, FDX/COL) for each Gigabit port and one Power LED for the unit. The following table provides descriptions of each LED status.

100/1000	■	■	■	■	■	■	■	■
LNK/ACT	■	■	■	■	■	■	■	■
FDX/COL	■	■	■	■	■	■	■	■
	1	2	3	4	5	6	7	8

Figure 2-3. LED Indicators

LED	Status	Description
Power	Green	Power On
	Off	Power is not connected
100/1000	Green	Port is operating at 1000Mbps speed.
	Orange	Port is operating at 100Mbps speed.
	Off	No device attached or in 10Mbps mode
LNK/ACT	Green	Port is connecting with the device.
	Blinking	Port is receiving or transmitting data.
	Off	No device attached.
FDX/COL	Orange	Port is operating in Full-duplex mode.
	Blinking	Packet collision occurring on this port.
	Off	No device attached or in half-duplex mode.

Table 2-1. The Descriptions of LED Indicators

3. Installation

Set the Switch on a sufficiently large flat space with a power outlet nearby. The surface should be clean, smooth, level, and sturdy. Ensure there is enough clearance around the Switch to allow air circulation and the attachment of the power cord and cables.

Attaching Rubber Feet

- A. Make sure mounting surface on the bottom of the Switch is grease and dust free.
- B. Remove adhesive backing from your Rubber Feet.
- C. Apply the Rubber Feet to each corner on the bottom of the Switch. These footpads protect the Switch from shock and vibration.

Power On

Connect the power adapter cable to the power socket on the rear panel of the Switch. The other end of the power cord connects to the power outlet. Check the power indicator on the front panel to make sure if power is properly supplied.

4. Network Application

This section provides a sample of network topology in which the MicroGST/5 and 8 switches are used. In general, the MicroGST switches are designed as high-bandwidth backbone switches.

You can use the MicroGST switches to connect servers, switches, workstations, and PCs to each other by connecting these devices directly to the Switch. The Switch automatically learns node addresses, which are subsequently used to filter and forward all traffic based on the destination address.

For enterprise networks where large data broadcasts are constantly processed, this switch is an ideal link between departmental switches and the core switch. All workstations can connect to departmental switches and those switches are then connected to the MicroGST/5 and 8 switches. Now all the devices in this network can communicate with each other. Connecting servers to the core switch is important because it allows each workstation to access the server's data.

This switch is designed for backbone connectivity. In the above example, servers, department switches, and workstation are directly connected to the MicroGST switches.

5. Technical Specification

The following table provides the technical specifications of the MicroGST/5 and 8 switches.

Standard	IEEE 802.3 10Base-T Ethernet, IEEE 802.3u 100Base-TX Fast Ethernet IEEE 802.3ab Gigabit Ethernet IEEE802.3x Flow Control and Back-pressure
Protocol	CSMA/CD
Technology	Store-and-Forward switching architecture
Transfer Rate	14,880 pps for 10Mbps 148,800 pps for 100Mbps 1,488,000 pps for 1000Mbps
Connector	5 or 8 Gigabit Copper: RJ-45, Auto-MDIX on all ports
MAC Address	4K Mac address table
Memory Buffer	1Mbits
Network Cable	10Base-T: 2-pair UTP/STP Cat. 3/4/5 cable EIA/TIA-568 100-ohm (100m) 100Base-TX: 2-pair UTP/STP CAT. 5/5e cable EIA/TIA-568 100-ohm (100m) Gigabit Copper: 4 pair UTP/STP CAT. 5e/6 cable EIA/TIA 568 100-ohm (100M)
Backplane	5 port: 10Gbps 8 port: 16Gbps

LED	<i>Per port:</i> 100/1000, Link/Activity, Full duplex/ Collision <i>Per unit: Power</i>
Power Supply	External power DC 12V/1.3A
Power Consumption	<i>5 port:</i> 7.5 Watt (maximum) <i>8 port:</i> 13.2Watt(maximum)
Operation Temperature	0° to 45° C (32° to 113°F)
Operation Humidity	10% to 90% (Non-condensing)
Dimension	165 x 100 x 32.5 mm (L x W x H) 6.5" x 3.94" x 1.3"
EMI & Safety	FCC Class A, CE, UL